

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of the claims in the application:

Listing of Claims:

1. (Currently Amended) A computer system, comprising:
 - an operating system adapted to execute a plurality of applications;
 - an isochronous audio application executable within the operating system substantially in parallel with other applications executable by the operating system;
 - a network interface configured to operate within the operating system, the network interface operable to send and receive via a switched network a stream of packets for the applications, where the stream of packets includes data packets and isochronous audio packets, transmission of the isochronous audio packets being in response to receipt of a respective synchronization packet, the isochronous audio packets including isochronous audio data, and the data packets including information other than the isochronous audio data and other than information related to communication of the isochronous audio data; and
 - an isochronous audio driver executable within the operating system, the isochronous audio driver in communication with the network interface and the applications, the isochronous audio driver configured to decode isochronous audio packets in the received stream of packets and provide decoded audio data included in the isochronous audio packets to the isochronous audio application,

the isochronous audio driver further configured to pass the data packets without change to a protocol stack, the protocol stack configured to provide information in the data packets to the other applications.

2. (Original) The computer system of claim 1, where in response to only one interrupt request from the network interface, the operating system is configured to execute the network interface, the isochronous audio driver and the isochronous audio application as a group to process isochronous audio packets received from and transmitted via the switched network.

3. (Original) The computer system of claim 2, where the network interface, the isochronous audio driver and the isochronous audio application are executed sequentially without interruption when an isochronous audio packet is received from the switched network.

4. (Currently Amended) The computer system of claim 3, where the stream of data further includes a plurality of synchronization packets and the network interface, the isochronous audio driver and the isochronous audio application are executed sequentially without interruption when [[a]] one of the plurality of synchronization packet is received from the switched network to process audio data and transmit an asynchronous audio packet that includes the audio data.

5. (Original) The computer system of claim 1, where the operating system is one of a windows operating system, a Unix operating system and a Linux operating system.

6. (Currently Amended) The computer system of claim 1, where the isochronous audio packets [[is]] are decoded to remove a header that includes an identification number, a source address and a data address.

7. (Currently Amended) The computer system of claim 1, where the isochronous audio packets are first isochronous audio packets, the stream of data further includes a plurality of synchronization packets, and the isochronous audio driver is configured to prepare second isochronous audio packets for transmission in the sent stream of packets in response to receipt of one of the synchronization packets that meets a predetermined criteria.

8. (Original) The computer system of claim 1, where the stream of packets is a stream of Ethernet packets.

9. (Original) The computer system of claim 1, where the isochronous audio packets include isochronous audio data that is formatted in accordance with a CobraNet specification, and the isochronous audio packets are decoded to extract the isochronous audio data and convert the isochronous audio data to audio data.

10. (Original) The computer system of claim 1, where the audio data is only uncompressed audio data.

11. (Currently Amended) A computer system, comprising:

a memory;

a network interface; and

a processor in communication with the network interface and the memory,

the memory comprising computer instructions executable by the processor, the computer instructions comprising:

an operating system adapted to execute a plurality of applications[[]; a]],
the network interface configured to operate within the operating system, the
network interface operable to send and receive via a switched network a stream
of data packets and isochronous audio packets for the applications, the
isochronous audio packets including isochronous audio data, the data packets
including information other than the isochronous audio data and other than
information related to communication of the isochronous audio data, and
transmission of the isochronous audio packets being in response to receipt of a
respective synchronization packet;

an isochronous audio driver in communication with the network interface
and the applications, where the isochronous audio driver is configured to identify
and decode isochronous audio packets to extract audio data; and

a protocol stack adapted to communicate with the isochronous audio driver and applications other than the isochronous audio application;

where the isochronous audio driver and the protocol stack are configured to execute within the operating system; and

where the isochronous audio driver is configured to provide the audio data from the decoded isochronous audio packets to the isochronous audio application, and pass the data packets received from the switched network to the protocol stack unaltered by the isochronous audio driver.

12. (Cancelled)

13. (Original) The computer system of claim 11, where the isochronous audio driver is further configured to generate and transmit isochronous audio packets from audio data.

14. (Original) The computer system of claim 13, where the stream includes synchronization packets, the isochronous audio driver configured to receive and decode one of the synchronization packets and generate an isochronous audio packet from audio data in response to receipt of the one of the synchronization packets.

15. (Original) The computer system of claim 11, where the operating system is multi-tasking and multi-threaded.

16. (Original) The computer system of claim 15, where the operating system is configured to execute other applications substantially in parallel with the isochronous audio driver and the isochronous audio application.

17. (Original) The computer system of claim 11, where the operations of the isochronous audio application all occur at the driver level of the operating system.

18. (Original) The computer system of claim 11, where the protocol stack includes a TCP/IP protocol.

19. (Original) The computer system of claim 11, where the isochronous audio driver is configured to analyze and sort the isochronous audio packets and the data packets.

20. (Currently Amended) A computer system, comprising:

a memory; and

a processor in communication with the memory, the memory comprising computer instructions executable by the processor, the computer instructions comprising:

an isochronous audio application configured to format audio data received from a source of audio data; and

an isochronous audio driver in communication with the isochronous audio application, the isochronous audio driver configured to convert the formatted audio data to isochronous audio data and buffer the isochronous audio data, where the isochronous audio driver and the isochronous audio application are executable within an operating system;

the isochronous audio driver configured to receive data packets from a protocol stack configured to execute within the operating system, the data packets including information other than the isochronous audio data and other than information related to communication of the isochronous audio data;

the isochronous audio driver adapted to receive and decode a synchronization packet receivable from a switched network, where the synchronization packet includes a frame number;

where in response to receipt of the synchronization packet, the isochronous audio driver is configured to generate an isochronous audio packet that includes buffered isochronous audio data and the frame number, the isochronous audio packet transmittable over the switched network.

21. (Original) The computer system of claim 20, where the isochronous audio driver includes a packet request module configured to request audio data from the isochronous audio application whenever a packet supply buffer included in the isochronous audio driver is less than full.

22. (Original) The computer system of claim 20, where the isochronous audio driver includes a packet synchronization module configured to receive the synchronization packet and extract the frame number there from.

23. (Original) The computer system of claim 20, where the source of audio data can be any one of a compact disc, an audio data storage device and a microphone.

24. (Original) The computer system of claim 20, where the isochronous audio driver includes a packet request module, a packet supply buffer module and a packet format module, where the packet request module is configured to monitor the packet supply buffer and request additional audio data from the isochronous audio application whenever the packet supply buffer is not full, and the packet format module is configured to extract audio data from the packet supply module and format the audio data to form isochronous audio data.

25. (Original) The computer system of claim 24, further comprising a transmit buffer, where the packet format module is configured to store isochronous audio data in the transmit buffer and generate isochronous audio packets from the isochronous audio data stored in the transmit buffer for transmission over the switched network.

26. (Original) The computer system of claim 20, where the isochronous audio data includes the data indicative of the resolution of a plurality of audio data samples included in the isochronous audio data, data indicative of the frequency of the audio data samples and data indicative of the number of channels of audio data that are included in the isochronous audio data.

27. (Original) The computer system of claim 20, where the audio data in the isochronous audio packets is uncompressed.

28. (Original) The computer system of claim 20, where the isochronous audio driver is configured to operate only on a driver level of a multi-tasking, multi-threaded operating system.

29. (Currently Amended) A computer system, comprising:

a memory;

a network interface; and

a processor in communication with the network interface and the memory,

the memory comprising computer instructions executable by the processor, the computer instructions comprising:

an operating system adapted to execute a plurality of applications substantially in parallel;

isochronous audio software executable with the operating system to process received isochronous audio packets, and generate isochronous audio packets from audio data for transmission;

[[a]] where the network interface is configured to operate within the operating system, the network interface adapted to send and receive via a switched network a stream of packets for a plurality of applications, where the received stream of packets includes data packets, synchronization packets and isochronous audio packets and the sent stream of packets includes data packets and isochronous audio packets, where transmission of each of the isochronous audio packets is in response to receipt of a respective one of the synchronization packets, and where the data packets include information other than the audio data and other than information related to communication of the audio data;

where the isochronous audio software is adapted to communicate with the network interface and the applications, the isochronous audio software configured to decode isochronous audio packets from the received stream and further configured to pass data packets from the received stream to the other applications through a protocol stack without any processing of the data packets by the isochronous audio driver, and

the isochronous audio software further configured to initiate transmission of the isochronous audio packets generated by the isochronous audio software in the sent stream of packets in response to receipt of a synchronization packet in the received stream of packets.

30. (Original) The computer system of claim 29, where the operating system is a windows based operating system.

31. (Original) The computer system of claim 29, where the isochronous audio software comprises an isochronous audio driver executable at a driver level of the operating system and an isochronous audio application executable at an application level of the operating system.

32. (Original) The computer system of claim 29, where the isochronous audio software comprises an isochronous audio driver and an isochronous audio application, and the operating system is operable in a safe mode in which the isochronous audio driver is enabled to be executed and the isochronous audio application is disabled.

33. (Original) The computer system of claim 29, where the isochronous audio software is configured to be executable in a pre-configured and pre-existing operating system utilizing pre-existing and pre-configured hardware.

34. (Currently Amended) A computer system, comprising:

a memory;

a network interface; and

a processor in communication with the network interface and the memory,
the memory comprising computer instructions executable by the processor, the
computer instructions comprising:

an operating system adapted to execute a plurality of applications[[:]]

[[a]] , the network interface configured to operate within the operating
system, the network interface operable to send and receive isochronous audio
packets and data packets via a switched network; and

isochronous audio software that is executable within the operating system
substantially in parallel with other applications executable by the operating
system, the isochronous audio software executable to process isochronous audio
packets received from or provided to the network interface, where the
isochronous audio packets each include audio data, and transmission of each of
the isochronous audio packets is in response to receipt of a respective
synchronization packet; and

the isochronous audio software is further executable to pass data packets
received from the network interface to a protocol stack accessible by at least one
of the other applications, the data packets including information other than the
audio data and other than information related to communication of the audio data.

35. (Original) The computer system of claim 34, where the network interface is
configured to generate an interrupt request to the operating system, the network
interface and the isochronous audio software executable to process the

isochronous audio packets in response to only one interrupt provided by the operating system in response to the interrupt request.

36. (Original) The computer system of claim 34, where the isochronous audio software is executable to format audio data into the isochronous audio packets for transmission over the switched network.

37. (Original) The computer system of claim 36, where the isochronous audio packets are formatted in accordance with a CobraNet specification.

38. (Original) The computer system of claim 34, where the isochronous audio software is configured to retrieve the audio data from a memory device and generate the isochronous audio packets provided to the network interface.

39. (Original) The computer system of claim 34, where the isochronous audio software is configured to process the isochronous audio packets received from the network interface to extract the audio data, the audio data storable in a memory device by the isochronous audio software.

40. (Original) The computer system of claim 34, where the switched network is an Ethernet network.

41. (Original) The computer system of claim 34, where the audio data is only uncompressed audio data.

42. (Currently Amended) A computer system, comprising:

a memory;

a network interface; and

a processor in communication with the network interface and the memory,

the memory comprising computer instructions executable by the processor, the computer instructions comprising:

an operating system adapted to execute a plurality of applications[[: a]],
the network interface configured to operate within the operating system, the network interface operable to receive isochronous audio packets and data packets from a switched network, the isochronous audio packets including isochronous audio data, and the data packets including information other than the isochronous audio data and unrelated to communication of the isochronous audio data, where transmission of each of the isochronous audio packets is in response to receipt of a respective one of a plurality of synchronization packets;
and

isochronous audio software that is executable within the operating system substantially in parallel with other applications executable by the operating system, the isochronous audio software executable to extract audio data from the isochronous audio packets received from a switched network, the isochronous

audio software further executable to pass the data packets unmodified from the network interface to at least one of the other applications.

43. (Original) The computer system of claim 42, further comprising a protocol stack executable substantially in parallel with the isochronous audio software to extract data from the data packets received from the switched network for the other applications.

44. (Original) The computer system of claim 42, where the isochronous audio software comprises an isochronous audio driver configured to extract the audio data and an isochronous audio application configured to process the audio data to be playable and savable in a predetermined format.

45. (Original) The computer system of claim 42, where the data packets are formatted to a transmission control protocol/Internet protocol.

46. (Original) The computer system of claim 42, where the switched network is an Ethernet network and the network interface is an Ethernet network interface.

47. (Original) The computer system of claim 42, where the network interface conforms to an IEEE 802.3 standard.

48. (Original) The computer system of claim 42, where the network interface is adapted to transmit the isochronous audio packets to the switched network.

49. (Original) The computer system of claim 48, where the isochronous audio software is executable to format audio data into the isochronous audio packets.

50. (Original) The computer system of claim 42, where the isochronous audio packets are formatted in accordance with a CobraNet specification.

51. (Currently Amended) A computer system, comprising:

a memory;

a network interface; and

a processor in communication with the network interface and the memory,

the memory comprising computer instructions executable by the processor, the computer instructions comprising:

an operating system configured to operate a multi-threaded, multi-tasking computing environment[[]; a]], the network interface configured to operate within the operating system, the network interface configured to transmit isochronous audio packets via a switched network, and configured to receive data packets and synchronization packets from a switched network; and

isochronous audio software that is executable within the operating system substantially in parallel with other applications executable within the operating system, the isochronous audio software executable to format audio data into

isochronous audio packets for transmission by the network interface in response to receipt of one of the synchronization packets;

the isochronous audio software further executable within the operating system to receive data packets from a protocol stack, the protocol stack in communication with at least one of the other applications, the data packets including information other than the audio data and unrelated to communication of the audio data.

52. (Original) The computer system of claim 51, where the isochronous audio packets are formatted in accordance with a CobraNet specification.

53. (Original) The computer system of claim 51, comprising network software that is executable to extract data from the data packets received from the switched network.

54. (Original) The computer system of claim 51, where the isochronous audio software comprises an isochronous audio driver.

55. (Original) The computer system of claim 51, where the isochronous audio software comprises an isochronous audio application.

56. (Original) The computer system of claim 51, where the data packets and synchronization packets are formatted to a transmission control protocol/Internet protocol.

57. (Original) The computer system of claim 51, where the switched network is an Ethernet network and the network interface is an Ethernet network interface.

58. (Currently Amended) A computer system, comprising:

a memory;

a network interface; and

a processor in communication with the network interface and the memory,

the memory comprising computer instructions executable by the processor, the
computer instructions comprising:

a network interface;

an operating system that is adapted to execute a plurality of applications, the applications executable within the operating system to communicate with a switched network via the network interface according to a network protocol; and

isochronous audio software that is executable within the operating system substantially in parallel with other applications executable within the operating system, the isochronous audio software executable to communicate isochronous audio packets with the switched network via the network interface, where transmission of each of the isochronous audio packets is in response to receipt of a respective one of a plurality of synchronization packets;

the isochronous audio software further executable within the operating system to communicate data packets between at least one of the other applications and the network interface, the data packets including information other than isochronous audio data and unrelated to communication of the isochronous audio data, the isochronous data packets including the isochronous audio data, where the data packets and the isochronous audio packets are formatted in accordance with different respective protocols.

59. (Original) The computer system of claim 58, where the protocol is a transmission control protocol/Internet protocol.

60. (Original) The computer system of claim 58, where the isochronous audio packets are formatted to a CobraNet specification.

61. (Currently Amended) A computer implemented method of communicating isochronous audio packets over a switched network, comprising:

receiving a stream of packets with a network interface, where the stream of packets ~~includes~~ including data packets and isochronous audio packets, transmission of each of the isochronous audio packets being in response to receipt of a respective synchronization packet;

processing the stream of packets with a network interface driver configured in an operating system;

processing the stream of packets with an isochronous audio driver to pass without change those packets that are data packets to a protocol stack;

the isochronous audio driver and the protocol stack executing within the operating system;

decoding those packets that are isochronous audio data with the isochronous audio driver; and

substantially in parallel decoding those packets that are data packets with the protocol stack, the data packets including information other than the isochronous audio data and information unrelated to communication of the isochronous audio data.

62. (Original) The method of claim 61, where processing the stream of packets with an isochronous audio driver includes determining whether the packet is an isochronous audio packet.

63. (Original) The method of claim 61, where decoding those packets that are isochronous audio data with the isochronous audio driver includes extracting audio data from the packets only if the packet is an isochronous audio packet.

64. (Original) The method of claim 63, where extracting audio data comprises further processing audio data that is extracted from the isochronous audio data with an isochronous audio application.

65. (Original) The method of claim 63, where extracting audio data comprises storing the extracted audio data on a hard drive.

66. (Original) The method of claim 61, where processing the stream of packets comprises generating an interrupt request, processing the stream of packets with the network interface driver and also processing those packets that are isochronous audio data with the isochronous audio driver when the interrupt request is granted.

67. (Original) The method of claim 61, where decoding those packets that are isochronous audio data comprises converting the audio data to audio data in a desired format.

68. (New) The computer system of claim 1, where the data packets are formatted in accordance with a first protocol and the isochronous audio packets are formatted in accordance with a second protocol.